Brownfields Bulletin
Breaking Down Barriers to Using Brownfields
2nd Quarter 2003, Issue 20

Federal Agencies Partner in Effort to Revitalize Brownfields Across the Country

At the 2002 National Brownfields Conference in Charlotte, N.C., U. S. EPA Administrator Christie Whitman announced that U.S. EPA and 21 other federal agencies and departments have committed to work together to redevelop brownfields under the new Brownfields Federal Partnership Action Agenda. Among those agencies are the U.S. Department of Housing and Urban Development, the U.S. Department of Transportation, the National Park Service, the Federal Housing Finance Board, the U.S. Economic Development Administration, the U.S. Department of Agriculture, and the National Institute of Environmental Health Sciences. The action agenda makes more than 100 commitments for cooperative work to help communities more effectively prevent, clean up, and reuse brownfields.

The action agenda is one piece of a comprehensive effort by the Bush administration to address brownfields cleanup and revitalization efforts. In 2002, the president signed the new Small Business Liability Relief and Brownfields Revitalization Act to help states and communities around the country clean up and revitalize brownfield sites. The president and Congress recognized in this new law the importance of federal partnerships in achieving their mutual goals of environmental protection and economic revitalization. This action agenda fosters those partnerships.

Highlights of the action agenda commitments include:

•U.S. EPA's commitment to provide potentially $850 million over the next five years to states, tribes, counties, municipalities, and non-profit organizations through brownfields assessment, cleanup, revolving loan fund, job training, and state/tribal grants;

•Commitments by the U.S. Economic Development Administration, U.S. Department of Housing and Urban Development, U.S. Department of the Interior, U.S. Department of Justice, and U.S. Department of Labor to offer funding priority to brownfields communities through their respective grant mechanisms;

•The National Oceanic and Atmospheric Administration's commitment to lead an interagency "Portfields" project that will focus on the redevelopment and reuse of idled or abandoned lands in and around ports, harbors, and marine transportation hubs;

•The U.S. Army Corps of Engineers' commitment to announce eight new pilots under its "Urban Rivers Initiative" to address restoration in and around urban rivers;

•A new, concerted effort to share program information with interest groups, by methods such as linking Web sites;

•A change in federal agency policies to facilitate brownfields redevelopment; and

•An effort to make funding and technical assistance to brownfield communities a budget priority at all federal agencies.

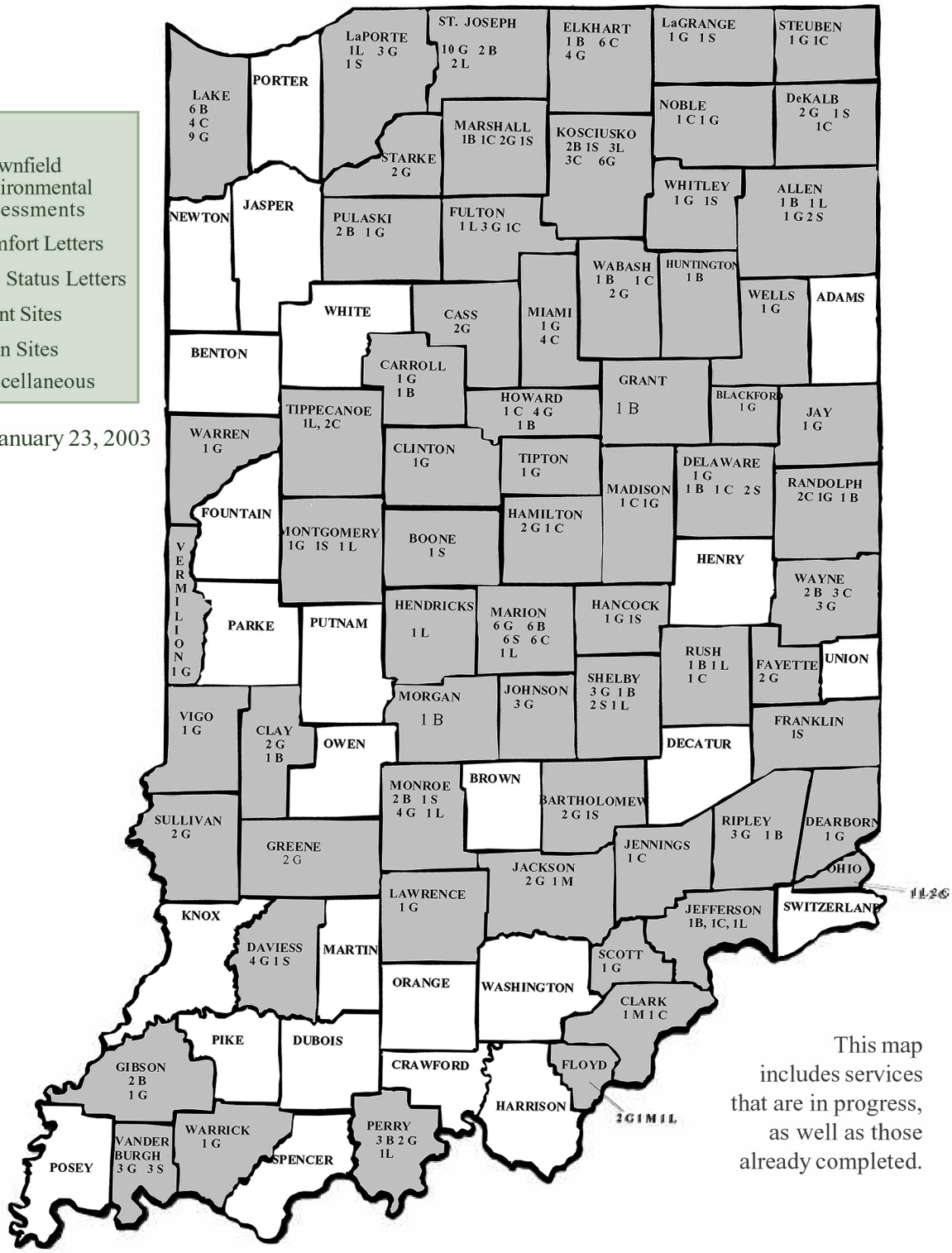
To obtain a copy of the Brownfields Federal Partnership Action Agenda, which includes a complete list of participating agencies, go to *www.epa.gov/brownfields/pdf/fedparaa.pdf*.

IDEM
BROWNFIELDS PROGRAM
SERVICES PROVIDED

KEY

- B = Brownfield Environmental Assessments
- C = Comfort Letters
- S = Site Status Letters
- G = Grant Sites
- L = Loan Sites
- M = Miscellaneous

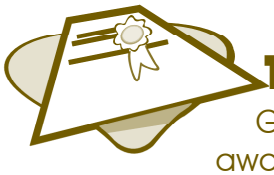
Revised: January 23, 2003



This map includes services that are in progress, as well as those already completed.

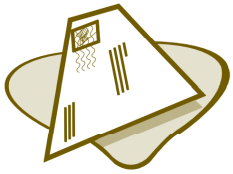
Brownfields Program Score Card

38
Assessments completed or referred



121
Grants awarded

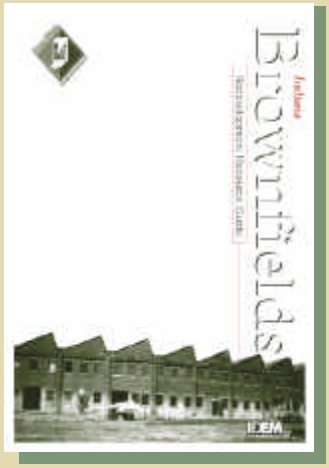
18
Loans approved



66
Comfort and Site Status Letters issued*

*Site Status Letters have been developed to replace No Further Action Letters formerly issued by IDEM's Brownfields Program.

Updated Indiana Brownfields Redevelopment Resource Guide Available

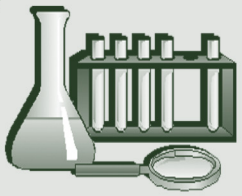


The Indiana Brownfields Redevelopment Resource Guide was developed through the Indiana Interagency Brownfields Task Force. The resource guide is intended as a general primer for local governments, organizations, and entities to use as they begin their brownfield projects. It is divided into two main sections. The first is a basic approach to brownfields redevelopment and is divided into three parts: planning, remediation, and redevelopment. The second section is a compilation of the potential available resources for a brownfields project.

The resource guide was first made available in December 1999 with a revised version following in March 2001. Another updated version is now available on IDEM's Brownfields Program Web site. The resource guide can be downloaded for free. The resources highlighted in the guide consist of financial assistance and technical incentives available through the Task Force member agencies. Please contact Tracy Concannon with any questions or comments regarding the resource guide.

New Brownfields Web Site Launched

The International City/County Management Association (ICMA) launched *BrownfieldSource.org* in November 2002. This Web site was designed for local government users and the general public to provide instant access to news, events, research reports, and other published materials related to brownfields revitalization, focusing on the latest in community, economic, environmental, governmental, innovative, legal, and redevelopment issues.



Chemical of Concern

Benzene

This article attempts to give only basic information due to limited space. Please consult the appropriate agencies and Web sites or a qualified specialist for more specific/comprehensive information.

Benzene is a colorless liquid with a sweet odor. It evaporates very quickly into the air and dissolves only slightly in water. Benzene is highly flammable and, in higher concentrations in the air, can be explosive.

Benzene vapor is heavier than air and will tend to accumulate in the lower regions of a confined space. When it comes into contact with water, benzene will float and spread over the top of a water body, increasing the chances of spreading the contamination over a wide area.

The chemical and drug industries have used benzene extensively as a solvent. It is also used as a starting material and an intermediate in the synthesis of numerous other hydrocarbon compounds. Because of its anti-knock characteristics, benzene is an especially important component of unleaded gasoline. Unleaded gasoline is normally 1 to 2 percent benzene by volume and can be found in concentrations of up to 3 percent. Due to its wide use, benzene ranks in the top 20 chemicals for production volume in the United States.

Also because of its wide use, benzene is commonly found in the environment. Industrial discharge, disposal of products containing benzene, and gasoline leaks from underground storage tanks can release benzene into the soil and groundwater. Benzene can pass readily into the air from water and from soil surfaces. Once in the air, benzene reacts with other chemicals and breaks down within a few days. Benzene in the air can attach to rain or snow and can be carried back down to the ground.

For further information, contact: *www.atsdr.cdc.gov/tfacts3.html* and *www.epa.gov/safewater/dwh/tvoc/benzene.html*.

Possible Means of Exposure to Benzene

Most people are exposed to small amounts of benzene on a daily basis, mainly through breathing air that contains the contaminant. Background levels of benzene in the air range from 2.8 to 20 parts per billion (ppb). Major sources of benzene contamination are tobacco smoke, automobile service stations, exhaust from motor vehicles, and industrial emissions. About 50% of the entire nationwide exposure to benzene results from smoking tobacco or from exposure to tobacco smoke. The average smoker (32 cigarettes per day) takes in about 1.8 milligrams of benzene on a daily basis (1999 data). Benzene contaminated water will cause benzene vapors in the home as the chemical escapes from shower or cooking waters.

Routes of entry include:

- *Inhalation of air contaminated with benzene vapors.* Benzene can enter the blood stream through the lungs.
- *Skin contact*. Benzene can enter the body through the skin if there is contact with gasoline while fueling a car or lawn mower.
- *Ingestion.* Benzene can enter the blood through the stomach and intestines when benzene-contaminated water is ingested.

Regulatory Levels/ Requirements

U. S. EPA Maximum Contaminant Level: 0.005 ppm or milligrams per liter (mg/L) in drinking water.

U.S. EPA Reporting Requirements: spills or accidental releases of ten pounds (proposed policy indicates one pound) or more of benzene must be reported to the National Response Center.

IDEM RISC Guidance: default closure level residential soil (0.034 ppm), default closure level residential groundwater (0.005 ppm), default closure level industrial soil (0.67 ppm), and default closure level industrial groundwater (0.099 ppm).

OSHA: the maximum allowable amount of benzene in workroom air during an 8-hour workday, 40-hour workweek is 1 ppm.

Products/Wastes Containing Benzene

- Gasoline, crude oil, and automobile exhaust
- Household products such as glues, paints, furniture wax, and detergents
- Cigarette smoke
- Natural sources of benzene include volcanoes and forest fires.

Health Effects

- A brief exposure of 5 to 10 minutes to concentrations of benzene between 10,000 and 20,000 parts per million (ppm) in the air can result in death.
- Lower contamination levels ranging from about 700 to 3,000 ppm can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. In most cases, people will stop feeling these effects when they stop being exposed and begin to breathe fresh air.
- High levels of benzene ingestion can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, coma, and death.
- Spilling benzene on the skin may cause redness and sores. Benzene in the eyes may cause general irritation and damage to the cornea.
- Benzene causes problems in the blood. People who breathe benzene for long periods may experience a decrease in red blood cells that can lead to anemia.
- Excessive exposure to benzene can be harmful to the immune system increasing the chance for infection and perhaps lowering the body's defense against cancer.
- Studies with pregnant animals show that breathing benzene causes harm to the fetus, including delayed bone formation, bone marrow damage, and low birth weight.

Continental Steel: Kokomo Community Works for Reuse

The city of Kokomo is looking for positive solutions. Home to one of Indiana's largest Superfund sites, the "City of Firsts" wants to break ground in the arena of beneficial reuse. As a result of its efforts, the city is now participating in a pilot program sponsored by U.S. EPA's Superfund Redevelopment Initiative.

The Continental Steel Superfund (CSSS) site is a former steel manufacturing plant that was placed on the U.S. EPA National Priorities List (NPL) in 1990. Continental Steel Corporation filed bankruptcy in 1986, and the now-vacant 125-acre facility is contaminated in many areas with metals, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs).

In addition to widespread contamination, the CSSS has had a widespread economic impact, beginning with prosperity and ending with loss of employment and a loss to the local tax base. The steel plant was at one time the largest employer in Kokomo. When the plant closed, many members of the community lost their jobs and pensions. The costs to U.S. EPA and IDEM for investigation and interim remedial and removal actions have risen to over $36 million. The estimated additional cost to remediate the site, according to the 1998 Record of Decision, is $85 million.

Remediation and reuse of the site is a high priority for the community. The city of Kokomo applied for a Superfund Redevelopment Pilot Grant and received the maximum amount of $100,000. U.S. EPA's Superfund Redevelopment Initiative is an effort to help local governments participate in the cleanup and reuse of Superfund sites by selecting response actions consistent with anticipated end use. Ten pilot projects were selected in early 1999, then in December 1999, the pilot program was made available nationally. Applicants had to be a unit of local government with a proposed or final NPL site within its jurisdiction, or with a site at which U.S. EPA was significantly involved with a pending cleanup decision. The remedy must not have already been constructed and the community not a potentially responsible party (PRP). The grants were awarded based on project strategy, budget, Superfund cleanup phase, anticipated role of current/future site owner, community-based planning and involvement, anticipated state role, and clearly identified value added through U.S. EPA assistance. Kokomo was among the 40 national pilot recipients that were announced in July 2000.

These grants specifically fund reuse assessments and reuse plans to help determine future land uses. They also fund activities to support the development, evaluation, and documentation of predicted reuse as it might affect or be affected by cleanup alternatives. Often the grants are used to hire a contractor to develop reuse plans for an abandoned site. Kokomo hired a Wisconsin company to perform its reuse study, which began with community involvement. At the first community meeting, participants helped develop a list of desired reuses and voted for their favorites. The contractor then performed a detailed analysis of the most favored alternatives and presented five scenarios to the community at a second meeting. IDEM and U.S. EPA participated in the reuse meetings, answering questions, explaining some necessary limitations in specific areas, and discussing how best to work around the remedial action components of the proposed cleanup design. A final report was released in February for public comment.

IDEM and Kokomo are working together to integrate Kokomo's reuse planning into the remedial designs for the CSSS. The goal is to develop remedial action plans that will prepare the site parcels for reuse and ensure that cleanup does not eliminate or increase the cost of a desired reuse. Kokomo reuse team members and remedial design team members attend each others' meetings and public participation sessions, and comment on these plans.

For more information about CSSS, please contact Pat Likins, IDEM, at (317) 234-0357.

Abandoned Continental Steel Plant before demolition.

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Brownfields Bulletin is published quarterly by the Indiana Department of Environmental Management to inform local government officials, business representatives, and interest groups about brownfields redevelopment initiatives and success stories from within and beyond the state. A brownfield site is an industrial or commercial property that is abandoned, inactive or underutilized due to actual or perceived environmental contamination. IDEM's overall mission is to make Indiana a cleaner, healthier place to live. IDEM's brownfields initiative helps communities remove barriers for sustainable growth.

Please contact Dan Chesterson of the IDEM Brownfields Program to inform IDEM of address changes, to be added or deleted from the mailing list or e-mail list serve, or to share your comments and ideas about this publication.

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IDEM's toll-free number: (800) 451-6027, press 0 and ask for a person by name or number, or dial direct.

Who Can Help

Technical and educational assistance

Indiana Department of Environmental Management
Brownfields Program Staff (listed top right)
100 N. Senate Ave., Suite 1101
P.O. Box 6015
Indianapolis, IN 46206-6015
www.IN.gov/idem/land/brownfields

Financial assistance

Indiana Development Finance Authority
Calvin Kelly, Deputy Director
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